

## Absolute maximum ratings

(Ta=25°C)

Symbol	Ratings	Unit
V <sub>DSS</sub>	150	V
V <sub>GSS</sub>	+20, -10	V
I <sub>D</sub>	±10	A
I <sub>D(pulse)</sub>	±40 (PW≤100μs, duty≤1%)	A
E <sub>AS*</sub>	100	mJ
I <sub>AS</sub>	10	A
P <sub>T</sub>	5 (Ta=25°C, with all circuits operating, without heatsink)	W
	50 (Tc=25°C, with all circuits operating, with infinite heatsink)	
θ <sub>J-a</sub>	25 (Junction-Air, Ta=25°C, with all circuits operating)	°C/W
θ <sub>J-c</sub>	2.5 (Junction-Case, Tc=25°C, with all circuits operating)	°C/W
V <sub>ISO</sub>	1000 (Between fin and lead pin, AC)	V <sub>rms</sub>
T <sub>ch</sub>	150	°C
T <sub>stg</sub>	-40 to +150	°C

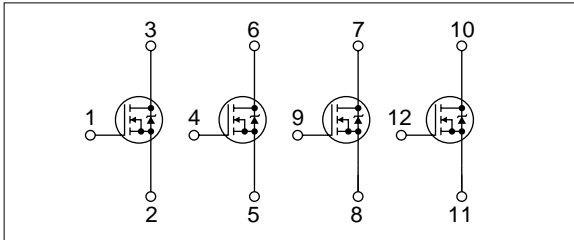
\* : V<sub>DD</sub>=25V, L=1.7mH, I<sub>D</sub>=10A, unclamped, R<sub>G</sub>=50Ω, see Fig. E on page 15.

## Electrical characteristics

(Ta=25°C)

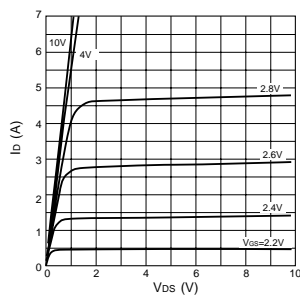
Symbol	Specification			Unit	Conditions
	min	typ	max		
V <sub>(BR)DSS</sub>	150			V	I <sub>D</sub> =100μA, V <sub>GS</sub> =0V
I <sub>GSS</sub>			±100	nA	V <sub>GS</sub> =20V, -10V
I <sub>DSS</sub>			100	μA	V <sub>DS</sub> =150V, V <sub>GS</sub> =0V
V <sub>TH</sub>	1.0		2.0	V	V <sub>DS</sub> =10V, I <sub>D</sub> =250μA
Re(yfs)	5	10		S	V <sub>DS</sub> =10V, I <sub>D</sub> =5A
R <sub>DS(ON)</sub>		150	200	mΩ	V <sub>GS</sub> =10V, I <sub>D</sub> =5A
		170	230	mΩ	V <sub>GS</sub> =4V, I <sub>D</sub> =5A
C <sub>iss</sub>		870		pF	V <sub>DS</sub> =10V, f=1.0MHz, V <sub>GS</sub> =0V
C <sub>oss</sub>		320		pF	I <sub>D</sub> =5A, V <sub>DD</sub> ≐70V, R <sub>L</sub> =14Ω, V <sub>GS</sub> =5V, see Fig. 3 on page 16.
C <sub>rss</sub>		210		pF	
td(on)		25		ns	
tr		50		ns	
td(off)		75		ns	
tf		40		ns	
V <sub>SD</sub>		1.0	1.5	V	I <sub>SD</sub> =10A, V <sub>GS</sub> =0V
t <sub>rr</sub>		500		ns	I <sub>F</sub> =±100mA

## Equivalent circuit diagram

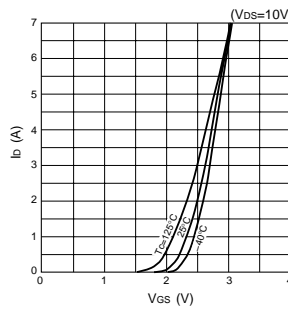


## Characteristic curves

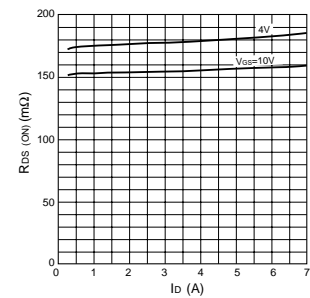
I<sub>D</sub>-V<sub>DS</sub> Characteristics (Typical)



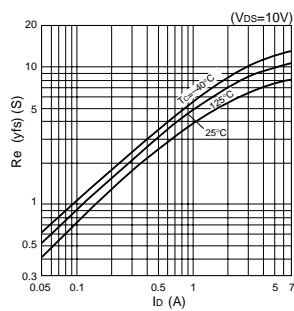
I<sub>D</sub>-V<sub>GS</sub> Characteristics (Typical)



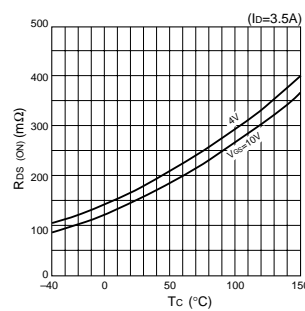
R<sub>DS(ON)</sub>-I<sub>D</sub> Characteristics (Typical)



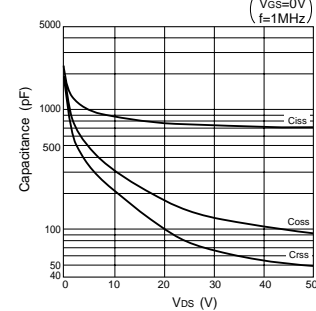
Re(y<sub>fs</sub>)-I<sub>D</sub> Characteristics (Typical)



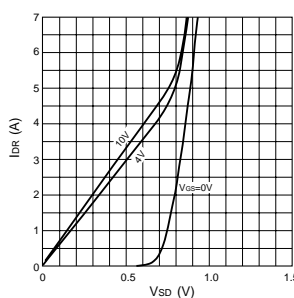
R<sub>DS(ON)</sub>-T<sub>c</sub> Characteristics (Typical)



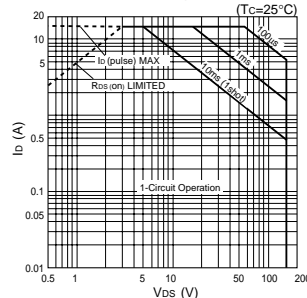
Capacitance-V<sub>DS</sub> Characteristics (Typical)



I<sub>DR</sub>-V<sub>SD</sub> Characteristics (Typical)



Safe Operating Area (SOA)



P<sub>T</sub>-T<sub>a</sub> Characteristics

